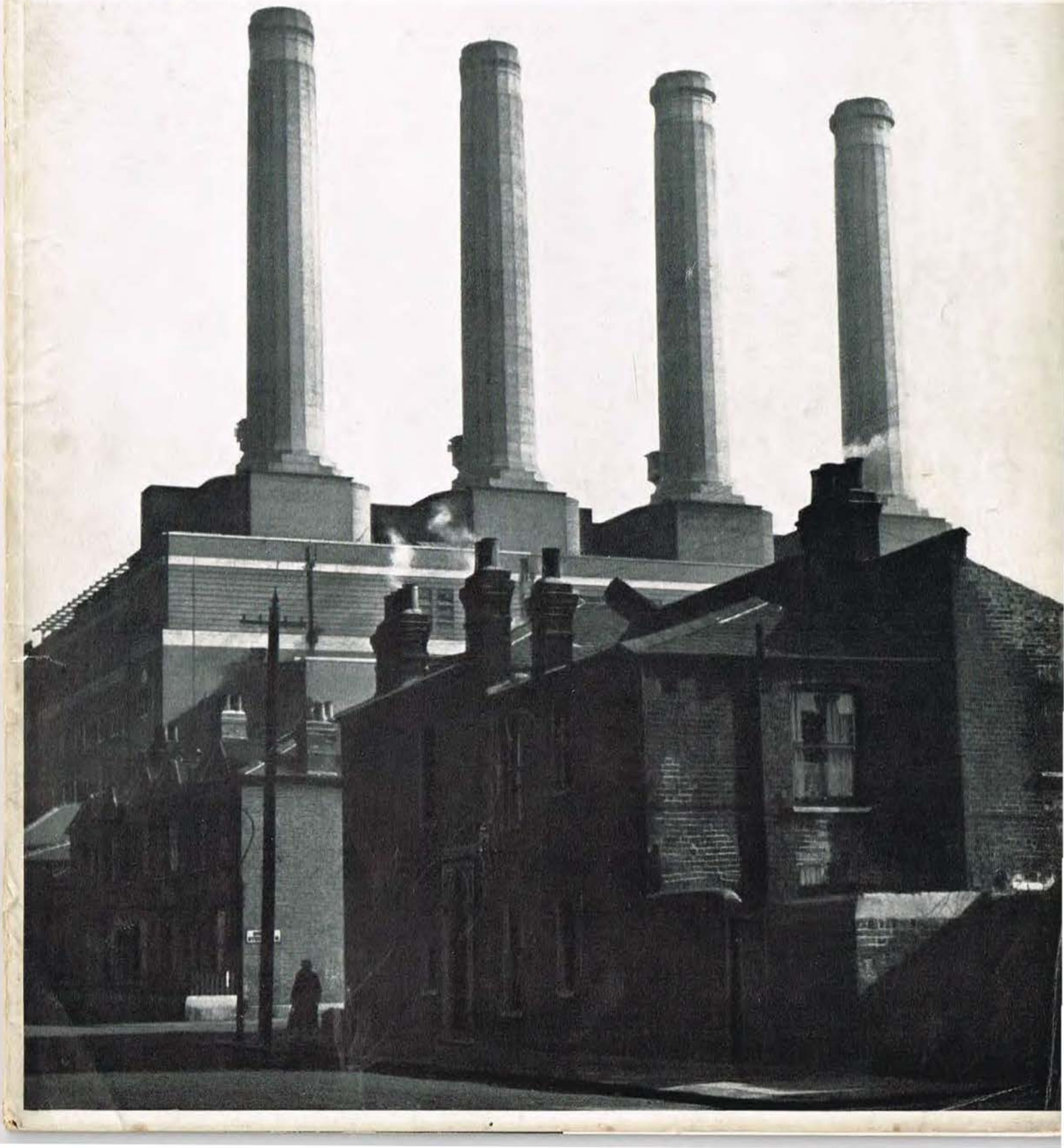
ICI MAGAZINE

PRICE TWOPENCE JANUARY 1950



THE I.C.I. MAGAZINE

VOLUME 28 NUMBER 159 JANUARY 1950

The *I.C.I. Magazine* is published for the interest of all who work in I.C.I., and its contents are contributed largely by people in I.C.I. It is edited by Henry Maxwell and printed at The Kynoch Press, Birmingham, and is published every month by Imperial Chemical Industries Limited, 26 Dover Street, London, W.1. Telephone: REGent 5067–8.

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Front cover photograph: "Chimneys," by W. Peacock.
Back cover photograph: "Saturday Market" (I.C.I. Magazine).

The Editor is glad to receive articles for publication. Payment will be made for accepted contributions. A preliminary letter is usually advisable.

Raw Materials of the Chemical Industry

COAL

BRITAIN'S industry was founded on coal. Today coal is more essential than ever before, but its industrial role is undergoing a change. Originally its importance lay primarily in its value as a source of heat and power; today the value of coal increasingly lies in the ability of the chemical industry to convert it into a variety of useful products such as dyes, plastics, petrol, and drugs. Several million tons of coal are used by I.C.I. every year as a raw material essential for the manufacture of scores of its most important products. The use of coal as a raw material has, indeed, already assumed such proportions that it seems likely that the necessity for conserving it for this purpose will be a most important incentive in developing alternative sources of power, such as hydro-electric or atomic power.

The reason for this new significance of coal is not difficult to see. The last century has seen the development of a new branch of industrial chemistry, based on organic—or carbon-containing—substances. Whereas the mainstays of the chemical industry were formerly mineral substances such as soda, sulphuric acid, and bleaching powder, there is now a vast and steadily increasing output of organic compounds.

The number of synthetic organic compounds which are used in daily life are far too numerous to list. A few examples are artificial textiles such as nylon, all forms of plastic, all dyestuffs, many solvents and anaesthetics, and many explosives. These diverse compounds have one feature in common—they all contain substantial proportions of the element carbon. Some, such as polythene, consist almost entirely of carbon; others, such as chloroform, contain relatively little.

Although atomic physicists are now able to carry out remarkable transformations of one element into another, these transformations are of no importance to the industrial chemist, who has to find his elements ready made. To make carbon compounds he must have carbon atoms, and of these coal is one of the best sources, for roughly three-quarters of it by weight consists of carbon.

The transformation of plants and trees which flourished millions of years ago into hard, black coal is one of the wonders of nature. Scarcely less remarkable, however, are the transformations by which the industrial chemist converts coal into hundreds of useful materials required by industry or in everyday life. These transformations have to be made indirectly, for coal itself is a mixture so complicated that little use can be made of it in its original form. The first step is normally to heat the coal strongly in retorts. Coal-gas is produced, a great variety of useful substances distill off as a tarry mixture, and coke—rich in carbon and essential for metallurgy—is left behind in the retort. Much of this treatment is incidental to the making of coal-gas, but so important are the products that equally large quantities of coal are specially treated in coke-oven works. The distillate—coal-tar—is a treasure-house of raw materials for the chemist, but very careful treatment is needed to separate the useful substances from each other and from the unwanted impurities with which they are mixed.

The inseparable relationship which now exists between the chemical industry and the tar distillers really had its beginning in 1857. In that year young Henry Perkin was experimenting at his home in the hope of making quinine from an aniline derivative. As we now know, his experiments were fundamentally wrong and could never have yielded the drug he was looking for, but they led to something far more important—the production of mauve, the first aniline dyestuff. Realising the importance of this accidental discovery, Perkin decided to set up as a manufacturer of his new dye and in doing so founded a new industry which soon became of world-wide importance. He was soon faced with a serious difficulty—that of obtaining aniline cheaply and in large quantities. From a tar distiller in Glasgow he obtained benzene, which by treatment with nitric acid was converted into nitro-benzene; this in turn was converted into aniline. From that day to this, benzene, the most volatile constituent of coal-tar, has remained the most important raw material of the industrial organic chemist. This was recognised by Imperial Chemical Industries when choosing a name for its headquarters at Blackley, for in chemical shorthand benzene is always indicated by a hexagon, the six corners of which represent the six carbon atoms present in the benzene molecule. It was thus that Hexagon House acquired its name.

Besides benzene, coal-tar yields a variety of other essential products, Quantitatively the most important of these is naphthalene, which is present to the extent of about 10% in tar. The first use of this material, once thrown away as being worthless, was as a substitute for camphor for making mothballs. Today it is a valuable starting material for many useful products, especially dyestuffs.

Naphthalene can be oxidised to a substance known as phthalic anhydride, which is extremely useful as a stepping-stone to other products. When this is combined with benzene, compounds related to anthracene can be made, including the important dyestuff eosin, best known as the colouring matter of red ink though it has many other uses. Anthracene itself occurs to the extent of about 1% in coal-tar; Dyestuffs Division uses several hundred tons of it every year.

Another important constituent of coal-tar is toluene, used for making a whole range of products from saccharin to T.N.T. (trinitro-toluene). During the war Nobel Division consumed huge quantities of this for T.N.T. manufacture, though today this activity is happily much reduced.

Phenol, better known as carbolic acid, is another useful tar product. Its antiseptic properties are well known. Trinitro-phenol, an intensely yellow substance, is the powerful explosive known as picric acid. Another use for phenol, for which large quantities are required, is for making phenol-formaldehyde plastics.

Many other products present in coal-tar are of industrial importance almost as great as those already mentioned. For example, cresol, a close relative of phenol,

Coal has become almost too valuable to burn as fuel. With the last half-century the chemist has taken coal and its simple by-products and transformed them into new materials which have become so much a part of our lives that their source is all too easily overlooked. In the home, on the farm, in the factory and office, not a day passes without our using something which came from coal

◁ *The pusher removes red-hot coke from the coke ovens at Billingham*

also is used for making plastics. It is also a powerful, though rather unselective, antiseptic, and large quantities of it are used for this reason.

Some of the uses of coal as a raw material within the various Divisions of I.C.I. have already been mentioned, but to list them all would be an almost impossible task, so complicated is the story. At Billingham Division, for example, nearly forty million gallons of creosote—obtained from tar distillers all over Britain—are used annually in the hydrogenation plant for making synthetic petrol. In the coke ovens there half a million tons of coal a year are converted into coke. When steam and air are passed over red-hot coke the products are nitrogen and hydrogen, from which ammonia is made, and carbon monoxide and hydrogen, used for making methanol. Every three tons of coal yields just over a ton of methanol. Methanol has many uses, but outstanding among them are for the manufacture of formaldehyde—itself utilised in many different ways, such as for making plastics—and of 'Perspex' (methyl methacrylate).

In General Chemicals Division large quantities of benzene are used for making 'Gammexane,' the remarkably specific insecticide. 'Gammexane' is the so-called gamma isomer of hexachlorobenzene. Some of the carbon content of 'Methoxone,' too, the selective weed-killer, is drawn from the vast reservoir of the coal mines. From coke—the residue of coal left after the tar has been driven out—and lime is made the very useful substance calcium carbide. When treated with water this yields the gas acetylene—a reaction once greatly practised by cyclists for lighting their machines. Apart from its use in oxy-acetylene welding, acetylene is a stepping-stone to a great many other substances. From it, for example, is derived trichlorethylene, widely used as a grease solvent and dry-cleaning fluid.

Dyestuffs Division, concerned almost exclusively with organic products, is naturally one of the heaviest consumers of coal as a new material. The equivalent of about three million tons of coal a year are handled by this Division and sent out in the form of dyestuffs, rubber chemicals, drugs, and other products. The consumption of coal as a raw material by Dyestuffs Division is indeed many times greater than its consumption of coal as a fuel. For example, last year nearly three million gallons of benzene—equivalent to well over two million tons of coal—were taken into the plant and sent out again in totally different forms. At the same time about five thousand tons of naphthalene, representing the destructive distillation of a further fifty thousand tons of coal, were used last year. It is interesting to note that this Division is a descendant of the original firm of Perkin and Son Ltd.—already briefly mentioned—the demands of which really founded the whole of the modern coal-tar industry.

It is difficult to predict what the future demands of the chemical industry for coal will be, but in view of the rapidly increasing demand for organic chemicals of every sort it too cannot fail to increase. Vast though the world's coal resources are, they have quite clearly a definite limit, for coal is an irreplaceable asset. There is therefore an urgent need to restrict every use of coal which allows the precious by-products to escape.

There is, however, one alternative source of carbon for industry which is already important and will certainly become more so in the future. This is petroleum. Fractional distillation yields simple compounds which can be used directly by industry; the high fractions—not generally directly usable—can be converted by a process known as "cracking" to the simpler substances most needed. It is, however, difficult to say to what extent petroleum can supplement coal as an industrial raw material, as there are many conflicting factors to be taken into account. Like coal, it is limited in quantity, and although the natural processes by which it is formed are even now not clearly understood it is at least certain that these processes take place so slowly that for practical purposes petroleum too is not replaceable. The need to husband reserves is therefore obvious. Moreover, the demands for petroleum for transport purposes and as a fuel are too apparent to need emphasis. It is clear, therefore, that the quantity which can be made available to industry is not unlimited. With the building at Wilton Works of a large plant for cracking oil in order to convert it into organic chemicals needed for purposes of synthesis I.C.I. is beginning to make use of petroleum as a chemical raw material. This process will be one of the most important in the whole of the new works.

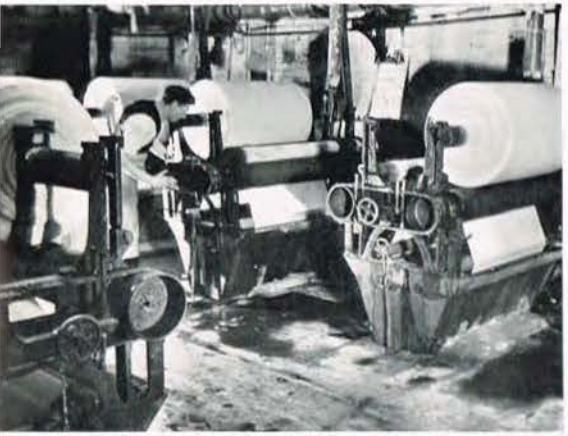


Photo by courtesy of Messrs J. Hardcastle & Co. Ltd. (The Bleachers' Association Ltd.)

Benzene, aniline, anthracene, naphthalene—these and other coal-tar products provide the basis for most of our dyestuffs

Calcium carbide (from coke and lime) is no longer considered solely as a source of light and heat. From it, for example, comes trichlorethylene—a chemical development of great value to industry. A first-class grease solvent, trichlorethylene cleans our clothes and curtains and simplifies engineering production and maintenance—especially that of road transport and large fleets of buses—and, in a highly refined state, has become one of the most recently proved anaesthetics

A Message for 1950 from the Chairman Lord McGowan, K.B.E.

"Sunday Times" Portrait Gallery photograph by Douglas Glass

ONCE again I send a New Year message to the readers of the *I.C.I. Magazine*. The *Magazine* is now to be issued each month instead of, as before, only appearing every second month.

When the *Magazine* restarted in January 1947 after the interval of the war years, I wrote that we should do our best to make our *Magazine* a human link and a publication worthy of us all. I also said that it was my wish that it should help to let you all know what I.C.I. stands for, what work is being done in our various Divisions, and of our many ramifications overseas. The *Magazine* is a means of giving us a personal contact—one with another—in I.C.I. I am glad, therefore, that it is now possible to bring out the *Magazine* once a month, as this will make it a much more effective link. Its aims and objects remain the same, and every effort will be made to ensure that they are realised.

Last year, in my New Year message, I reviewed the progress that had been made by our country in the year that had passed. Unfortunately this progress has not been maintained. Nothing is to be gained by covering up unpleasant facts with a lot of soft-sounding words. In a speech which I made in Birmingham last November to the National Union of Manufacturers of which you will probably have seen a summary in the newspapers, I referred to the devaluation of the pound. I emphasised the extreme gravity of the Government's action in writing down the value of our currency, which is still the most important trading currency in the world. I said that it was a measure of the straits to which the country had come that so much had now to be staked on a single throw. We have put up prices against ourselves in the hope that we shall be able, by using the immediate competitive advantage, to increase our export sales sufficiently to show a net gain on balance. This will not be as easy as it looks. Even raw materials from non-dollar countries will cost us more where there is a world market for them. At the same time firms here who are dependent to a large extent on raw materials from America, without possessing a corresponding advantage in sales to that country, will almost certainly be compelled to raise their selling prices here. This will start the spiral again and have an adverse effect on the cost of living.

After the war there were high hopes of what could be achieved by what was broadly described as economic planning. I think it must be frankly admitted that these hopes have not been fulfilled. Our national planning has perhaps made some contribution to orderly arrangement, but it has paid insufficient attention to the crucial problem of the United Kingdom's deficit on its dollar account. As I stressed at Birmingham, our main error has been to lead the public to believe that we could recover quickly from the effects of the war, that our standard of living could be almost immediately raised above its pre-war level, that we could undertake a vast industrial reconstruction and that we could carry through a great extension of our social services; in other words, that we could have our cake and eat it. It is because these beliefs have been encouraged that we are in our present plight.

It is essential to clear away these misunderstandings if all classes are to co-operate in a great effort at recovery, designed to bring our domestic economy into line with conditions in the outside world. It is to this problem of adaptation that policy should have been directed, not to the folly of nationalisation and the blind pursuit of extravagantly administered social schemes, without regard to the effects of internal policy on our external position.

Unfortunately calm and dispassionate discussion is hindered by the fact that among political opponents there is often no room for shades of colour—there is only black or white. This shows itself mostly in relation to unemployment and the social services. Full employment is set up as a political aim, and its existence since the war is claimed as a great victory for our economic planning. Nothing of the sort; after six years of war-production effort, lack of maintenance of capital assets, and war destruction, full employment was almost certain for a period and was anticipated by all political parties. If a critic points to certain disadvantages which over-full employment has brought he is branded as one who wishes to obtain a whip hand over labour through the fear or actuality of heavy unemployment. Likewise, to criticise the vast extension of our social services

is to risk being accused of not wishing to see them continued or extended. Naturally there is no one of us who wishes to see a single family in want, and it is very desirable that we should take steps to abolish poverty. We must have a recognition of past errors and the need for new policies if we are not to meet further crises, heavy unemployment and a drastic fall in the standard of living.

Even new and appropriate policies, however, cannot be expected to succeed without the prior requisite that there should be no further propaganda designed to set class against class, wage-earners against earners of other types of income, especially against dividend earners, and workers against management. How long will it be before it is recognised that the interests of management and workers are not conflicting but complementary? Human relations are all-important in industry, and we in I.C.I. may be proud of what we have accomplished. We were pioneers in the field of joint consultation, and as management we discuss with our workers their own individual problems as well as those of management. The meetings of our Central Works Council, the last of which is reported in another part of this *Magazine*, are proof of the high degree of confidence and understanding which exists within I.C.I. between management and workers. What we need above all else at the present time is a new leadership which will harmonise and not disrupt the different elements in society, and bring to them a unity of purpose.

In my view, the true solution to the country's economic difficulties is not to increase production by working longer hours but to obtain greater production from existing hours of work by greater effort. That there is room for this I have no doubt. One of the consequences of over-full employment and the breaking down of incentives to hard work, partly as a result of our vast burden of taxation, is an obvious lessening of effort. It shows itself in slower rates of working, in absenteeism, in unofficial strikes, in obstruction to new and more economic methods of working, in the creation of unnecessary jobs among operatives working as a team, in unpunctuality, in innumerable rest pauses or breaks for one reason or another, and in many similar ways. In the straitened circumstances of our country industry can no longer afford to employ the work-shy, the habitual absentee and the incompetent.

The next year or two is bound to be a testing time, both for employers of labour and for the trade unions and the workers they represent. Labour has enjoyed a sellers' market for so long and the workers have been lulled so completely into a sense of false well-being in our welfare state that the necessary readjustment in their mental outlook as our true economic position is brought home to them is bound to be a painful one. Disillusionment can never be a happy process.

For myself, I have confidence in our Trade Unions. I believe that they will succeed in re-establishing the control over their members which they seem to have lost. But we should deceive ourselves if we thought that they will have an easy task. It is a supremely difficult and delicate one, calling for strength of character, skill and tact. It behoves us, as industrialists, to show an understanding of their problems and to help them and our workers in any way we can.

At this juncture in our economic affairs it would be a tragedy and a national disaster if we were to pass through a period of misunderstanding and deteriorating industrial relations. It can, and I think will, be avoided if we, as industrialists, bring to our relationships with our workers both tact and a human understanding of their hopes and aspirations. It is essential, in my opinion, that management should get closer to the workers and explain to them far more of what is involved in regard to their jobs and to the problems that beset their particular industry and those of the country.

I have dwelt at some length on this aspect of our economic problem because to me the human side of industry is quite as important as the purely technical and commercial sides. So far as we in I.C.I. are concerned, we have nothing with which to reproach ourselves. We are all pulling our weight. The year that has passed has seen the inauguration of the great new project at Wilton—a centre of modern chemical industry to which the scientists of the world may well make pilgrimage—and this was, I am sure, a source of pride and stimulus to all our people. Already we can see outlined the shape and size of the great things that are to come.

There is no call that has been made upon us to which we have not responded. It will be the same in the future, and we may be proud of ourselves because of this. But here I must enter a word of the most solemn warning. If I.C.I. were ever to become nationalised I do not believe that the spirit which has made it all that it is today would long continue. It would become subject to influence and controls, which would be harmful to an organisation such as ours. Its enterprise would be curtailed, and enterprise I can assure you is its very life-blood. Under nationalisation I.C.I. would no longer be able to give of its best to the nation, and would start to lose its competitive place with the chemical industries of other nations, a very serious thing for the future of British industry. Too many people, as I said at the Annual General Meeting, think of the nationalisation of a large industrial concern as a domestic affair only, and fail to realise what repercussions action of this kind would have in our markets overseas. I speak from personal knowledge. Nationalisation of our Company would be regarded by those with whom we trade and with whom we have joint manufacturing enterprises as being entirely destructive of the goodwill and cooperation which have been built up over the years and which have proved of so much benefit not only to this Company but to the country. It is not only I.C.I. but Great Britain which would be the loser, and that at a time when we can least afford such a loss of earning power in valuable foreign currencies.

In the year which now unfolds there must be a General Election, and never perhaps will decisions have to be made with more far-reaching effect upon our welfare and future. I can only hope that whatever way the election turns a sense of responsibility will be maintained and that the leaders of all parties will do their best to avoid extending the misunderstandings and perplexities which already separate those who adopt the Socialist and the Conservative or Liberal outlook. The paramount demand as I see it upon all who aspire to leadership in this critical time is to show that we have a common interest and common future.

If what I have said suggests a spirit of pessimism I would wish to remove that impression. I am an optimist as regards our ability to survive the present crisis if we face up to our problems, serious and diverse as they are. We have immense reserves of character which have seen us through in the past, but simply to rely on this historic fact, and our past traditions, will not suffice. If we are to survive there must be a new spirit inculcated in the minds of our people to ensure that every ounce of effort, both brawn and brain, of which we are each capable is expended in the solution of our economic and financial difficulties.

A happy New Year to you all!

I.C.I. NEWS

The Winnington War Memorial

A presentation to Mr. Finlay from his many friends was made by Mr. J. R. Allen, works manager at Lostock

ALKALI DIVISION

Unveiling of Winnington War Memorial

The memorial to the 103 men and women of the Alkali Division who lost their lives in the 1939–45 war was unveiled at Winnington on Saturday, 5th November, in the presence of more than 500 relatives and representatives of the management, staff and workpeople of the Division. The ceremony began with the singing of the hymn "For all the Saints who from their Labour Rest" by the choir of Northwich Parish Church, after which Mr. W. M. Inman unveiled the memorial, which was dedicated by the Vicar of Northwich, the Rev. A. W. Maitland Wood.

After "Last Post" and "Reveille" had been sounded by trumpeters of the I.C.I. Alkali Band, the Lamp of Remembrance at the top of the memorial was lit and the works flag hoisted to masthead. Wreaths from the Company and from relatives of the fallen were laid at the foot of the memorial and the ceremony ended with the singing of the hymn "O God, our help in Ages Past" and the National Anthem, followed by the Benediction.

Retirement of Mr. S. T. Battersby

Mr. S. T. Battersby, chief of the newly formed Central Services Inspection Department at Winnington and well known to many members of the Company outside his own Division, has retired after 30 years' service. Many telegrams of good wishes were received from all over the country at the dinner which was held in his honour when he was presented with a 12-bore shotgun on behalf of his many friends at Winnington.

Retirement of Mr. J. Finlay

The retirement of Mr. John Finlay, a fitter's labourer at Lostock Works, is notable in two respects, not only for the length of his service of 51 years, which is fine enough in itself, but for the fact that throughout this long period of over half a century Mr. Finlay has not been absent for a single day through sickness. A presentation from his many friends at Lostock was made to Mr. Finlay by Mr. J. R. Allen, the works manager.

Death of Mr. H. E. Jones

It is with the deepest regret that we have to report the sudden and unexpected death of Mr. H. E. Jones, Technical Service Manager of the Alkali Division, on the evening of October 10th.

A Record Chrysanthemum

The magnificent chrysanthemum reproduced on page eight bears 137 blooms and recently won the first prize and diploma at the Holmes Chapel flower show. Mr. John Towers, who for the last 42 years has worked at Middlewich Works and is now a Laboratory shiftman, grew this plant from a cutting he took in January. When the cold weather forced him to bring it into his greenhouse in October, he had to dig a hole in the floor so that the flowers, which stand 7 ft. 3 in. above the pot, should not foul the roof. It took a great deal of judgement, four strong men and a horsebox to get this huge exhibit to the show.

Mr. Towers attributes the fine growth of this plant to regular meals. "You can't be slipshod with chrysanthemums," he often stresses; "they need meals as regularly, if not as often, as my grandchildren do." Dinner time for the chrysanthemums comes every other week, but what he feeds them with is his own particular secret.

137 blooms on one plant—and Mr. Towers who grew them

DYESTUFFS DIVISION

Mr J. B. Wykes

Mr. J. B. Wykes, whose picture we reproduce, has been elected chairman of the Central Committee of the I.C.I. Foremen's Association.

He started work with the Company in January 1920 in the Service Section of the Engineering Department and was later promoted foreman; subsequently he took charge of the works Fire Service. At one time a member of the works council, he was in 1930 appointed Dyestuffs representative on the committee of management of the I.C. Workers Friendly Society.

For the past seven years Mr. Wykes has been the chairman of the Huddersfield Works Foremen's Association.

Mr. James B. Wykes

Mr. S. Ellis (General Chemicals Division, Wade Works)

GENERAL CHEMICALS DIVISION

Award for Gallantry to Mr. S. Ellis

Mr. S. Ellis of Wade Works Safety Department has been presented with a parchment testimonial from the Royal Humane Society for his rescue of a woman from drowning in the Trent and Mersey Canal near Barnton last July. Although he had not swum for fifteen years Mr. Ellis unhesitatingly dived in and rescued the drowning woman, who recovered after Mr. Ellis had applied artificial respiration.

LIME DIVISION

Retirement of Mr. L. G. Sewell

The time has come when, to the regret of all in the Lime Division, the chairman, Mr. L. G. Sewell, M.C., B.E., M.I.M.M., M.I.Chem.E., F.G.S. is to retire.

Mr. Sewell was born in Sydney, Australia, and in 1909 took his degree in Mining and Metallurgy at the university there. Before the first world war he was engaged in the metal-mining industry in that country. He served with the 1st Australian Machine Gun Battalion, A.I.F. in Egypt, France and Belgium. He was awarded the Military Cross and was mentioned in despatches, being twice wounded.

In July 1926 he was appointed General Works Manager of The Buxton Lime Firms Co. Ltd., and in June 1927 became one of its directors. In 1931 he was made managing director of the Lime Group of I.C.I., and in 1939 group chairman. In 1935 he was appointed managing director of Casebourne & Co. (1926) Ltd., and later chairman, relinquishing this position in 1943 when the Casebourne interests were taken over by the Billingham Division.

Mr. Sewell was responsible for the initiation of the schemes on which were based the opening up and development of

Mr. L. G. Sewell

Tunstead Quarry and Works, the establishment of the present lime works at Hindlow and the reorganisation of the Buxton Central Kilns.

Besides much meritorious work with the L.D.V., he commanded B Company of the 2nd Derbyshire (Buxton) Battalion, Home Guard. Mr. Sewell was also responsible during the last war for the establishment and running of a range for the development and proofing of ammunition for the Blacker Bombard and the P.I.A.T.

Mr. Sewell is a kind man, always willing to give a helping hand to the unfortunate, and genuinely interested in all the human aspects of management. Possessed of wide knowledge and with a very accurate memory, Mr. Sewell is also a lover of the arts with a particular taste for books. He has been a churchwarden of the Parish of Buxton, a member of the house committee of the Devonshire Royal Hospital, president of the Harpur Hill Division of the St. John Ambulance Brigade and of I.C.I. (Lime) Hindlow Recreation Club and for seven years president of the Buxton Branch of the British Legion.

The place held by Mr. Sewell in the life and the affection of Lime Division will not easily be filled.

METALS DIVISION

The Chairman's visit

During a visit to Birmingham on 11th November Lord McGowan spent several hours at Metals Division headquarters, during which time he took the opportunity of visiting the machine shop and toolroom.

The Chairman saw an impressive display of the many jobs turned out there, and then, under the guidance of the shop managers, Messrs. Keeling and Gavin, made a tour of the department, chatting to various employees about their jobs. Lord McGowan described the quality of the workmanship as a revelation and commented that it was obvious that those who designed and executed such work had pride in their craft.

NEWS FROM OVERSEAS

Death of M. van Marcke de Lummen

It is with great regret that we announce the death of M. van Marcke de Lummen.

"Van Marcke," as he was so widely known, had been associated with I.C.I. and its predecessors for a great number of years, having been first appointed as an agent of the United Alkali Company for the sale of saltcake in Belgium. In 1919 he was appointed agent of Explosive Trades Ltd. and from 1923 to the commencement of hostilities in 1939 acted as I.C.I.'s general representative in Belgium. In 1946 he was appointed chairman of I.C.I. (Belgium) S.A. upon the formation of that company.

M. van Marcke de Lummen had an engaging personality and a dry sense of humour. He will be greatly missed by all his many friends in the Company.

NEWS FROM THE REGIONS

Retirement of Mr. Edgar E. Lacey

On 30th September the Northern Region lost the services of one of its most respected personalities through the retirement of Mr. Edgar Lacey, Area Manager at Bradford.

Mr. Lacey retired after 37 years' service, having joined Read Holliday & Co. in 1912. From that time until his retirement he was mainly concerned with Dyestuffs affairs and was Area Sales Manager of the Dyestuffs Department in addition to Area Manager. His trade knowledge of Yorkshire was profound, and in no small measure he contributed to the Company's goodwill and prestige during many years of close contact with the Company's customers.

Glasgow Humane Society Award for Mr. Victor D. Warren

The *Glasgow Herald* recently contained the following reference to Mr. Victor D. Warren, Scotland and Northern Ireland Regional Manager:

"The Glasgow Humane Society's certificate for gallantry was yesterday presented to the Lord Provost of Glasgow, Mr. Victor Warren, in recognition of his attempt to save the life of a gillie when a small boat in which they were fishing in Loch Arkaig, Inverness-shire, overturned in a squall last May.

"Lord Inverclyde, making the presentation in the City Chambers, said that that was the first time in the history of the organisation that the president of the society while in office had received the award."

NOBEL DIVISION

Royal Society for the Prevention of Accidents

Safe Driving Awards

On Friday, 14th October, at a dinner held at the New Mason Arms, Mexborough, eleven drivers of Nobel Division's Westfalite Factory received awards for safe driving from the Royal Society for the Prevention of Accidents. The following awards were presented:

Gold Medals (10 years): Mr. C. Lindsay, Mr. G. Wright, Mr. W. Hibbert; Oak Leaf Bars: Mr. C. Lindsay, Mr. G. Wright; Silver Medals: Mr. A. Blunn, Mr. F. Shepherd; Bars to Silver Medals: Mr. W. Hibbert, Mr. C. Robinson; Diplomas: Mr. A. Blunn, Mr. F. Shepherd, Mr. C. Jenkins, Mr. J. Newbart, Mr. E. Sheriff, Mr. W. Calladine, Mr. F. Dudhill.

Ardeer National Savings Group

Members of the Ardeer factory National Savings Group are to be congratulated on the results of their recent savings drive. In one week last November an army of canvassers and stamp sellers succeeded in selling no fewer than 11,500 certificates to their colleagues in the factory, an achievement which has earned the praise of the Scottish Savings Committee.

Mr. T. Mair, the local area organiser of this committee, recently paid a visit to the factory and presented medals for

long service in the savings movement to nine members of the Ardeer group, Messrs. A. Wilson, T. S. Muir, R. W. Macaulay, R. W. Cuthbertson, J. McComley, A. Archibald, J. Morgan, G. Bates and J. McCall.

Silver Punch Bowl presented to Deerpark Factory, I.C.I.A.N.Z.

As a token of their appreciation of more than 5000 parcels which the employees of the Deerpark factory of I.C.I.A.N.Z. have sent them during the past three years, the members of Ardeer Factory have presented their Australian friends with a silver punch bowl. The bowl, which is of the traditional Scottish Monteith design, will be used as a sports trophy at Deerpark's annual picnic.

The Monteith Bowl

PAINTS DIVISION

"People and Paint"

To obtain the housewife's viewpoint on paints and finishes, Paints Division recently engaged Mass-Observation Ltd. to conduct an enquiry among more than 2000 housewives in Great Britain and Northern Ireland. The results of this enquiry have been published in a booklet entitled "People and Paint," which was released to the Press at a conference held at the Charing Cross Hotel on 14th November.

SALT DIVISION

Weston Point War Memorial Plaque

A Memorial Plaque in memory of the four employees—Thomas A. Butterworth, Flt./Sgt. R.A.F., Owen Walker, Tpr. Armoured Brigade, Samuel Giles, Sgt. R.A.O.C., Arthur Ryding, Gnr. R.A.—who gave their lives in the service of their country during the 1939–45 war was unveiled on Friday, 11th November, by Mr. T. Crompton, Division Director, before a gathering of relatives of the fallen, and fellow employees. The service was conducted by the Reverend J. F. P. Burke, M.A., Priest in Charge, Christ Church, Weston Point, and the Reverend C. S. Morris, Methodist Minister.

Retirement of Mr. Oliver Wilkinson

His many friends in Salt Division recently bade farewell to an old and trusted friend in the person of Mr. Oliver Wilkinson, who has left to enjoy a well-earned rest after 51 years' service with the Company.

Salt Division Memorial Plaque: Relatives and fellow-workers of the Fallen assembled round the Memorial during the service

Mr. Wilkinson joined the Company at Over Works office at the age of 14, and two years later became a waterman on the Company's barges, finally becoming captain of the *Standard*. In 1938 illness, unfortunately, compelled him to leave the river, and he was transferred to the dockyard, where he has spent the last eleven years of his working life.

Trade Union Award to Mr. R. E. Garratt

In recognition of his 31 years' service as a sick visitor of the Winsford Branch of the Amalgamated Engineering Union, Mr. Robert E. Garratt, a fitter of Salt Division's Winsford Works, was presented with the A.E.U. medal of the Order of Merit and framed certificate at a specially convened branch meeting at the Winsford Guildhall on Monday, 7th November. At the same meeting he was unanimously re-elected for a further term of duty.

Mr. Garratt joined the Company in 1901, two days after his fourteenth birthday, and has been continuously employed at Winsford ever since. He became a member of the A.E.U. in 1913 and five years later assumed the duties of sick visitor. His visits have been carried out in all weathers; on one occasion he had to plough through snow nearly two feet deep to reach the home of a member.

Mr. R. E. Garratt

Tuckingmill and SAFETY FUSE

CORNWALL'S landscape is studded with old mine-workings—evidence of a flourishing industry a hundred years ago.

Since then, and until cheaper supplies from other sources caused the trade to go elsewhere, tin and copper mining in Cornwall found work for about one-fifth of the county's population.

As long ago as 1772 one of the biggest mines produced ore worth over £2,000,000. In one parish alone, however, one in every five miners lost his life through flood, ground falls, or premature explosions. The fuses used were crude contrivances of goose quills filled with powder and stuck end in end. Small wonder, perhaps, that the Cornish town of Camborne—by the famous South Crofty mines—should have become the birthplace of the safety fuse.

Safety fuse was invented, and put on the market in 1831, by William Bickford, founder of Bickford Smith and Company, and great-great-grandfather of the present works manager, Mr. M. G. Bickford-Smith. The building in which it was first made still remains as part of Nobel Division's Tuckingmill factory.

In the course of a year the factory produces thousands of miles of safety fuse. Even so, the world-wide adoption of safety fuse for blasting operations has caused the demand to grow year by year, and large quantities are also made at Ardeer.

As the birthplace of what has proved so great a boon, Tuckingmill will always be a place of interest, and a visit to the factory is something to be remembered.

Unlike some of I.C.I.'s newer factories, Tuckingmill has grown with the century and more years of its existence, and is now a colony of stoutly built, cream-painted stone buildings nestling "upstairs and downstairs" on a hillside, overlooking the main street joining Camborne and Redruth.

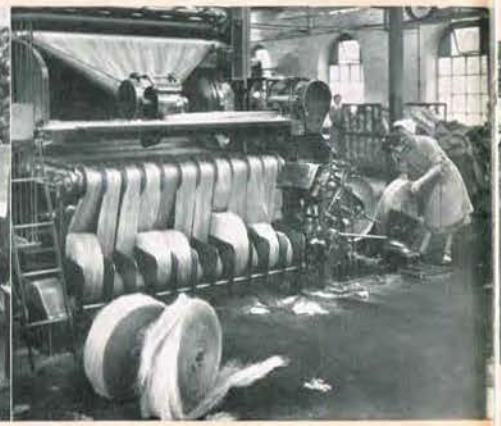
Though not unduly extensive in area, its material needs are far from modest. Production of fuse at Tuckingmill entails the bringing of thousands of cases of fuse powder from Ardeer, bales of jute from India, as well as rubber, gutta-percha, and balata from Malaya, the Dutch East Indies and South America, also thousands of miles of "doubled" cotton thread from I.C.I.'s Crosslee Mills by Johnstone in Renfrewshire. Tuckingmill's payroll, including those at Kennall Vale (I.C.I.'s smallest factory), a few miles away, where are processed the rubber, gutta-percha, and balata which impregnate and waterproof the outer layers of safety fuse coverings, numbers 430. As may be expected, it includes a large contingent of employees who have been with the Company all their working lives.

Illustrated with photographs by The Kynoch Press Studio

◁ Preparation of the jute begins with softening, when S. Weeks breaks the 400 lb. bales and, on a machine with fluted rolls which can deal with four different kinds at a time, starts crushing the strands while water and oil are sprinkled on the jute to bring it into milling condition.

Hanks of softened jute are fed by Miss E. Sowden into a breaker which teases out the fibres, blends them, and delivers a continuous roll of soft, hair-like material. ▽

The rolls of fibre from the breaker are collected by Miss Pearce, who, incidentally, minds three machines during her shift, and are fed as needed into the finishing carder. Here, eleven rolls receive the same kind of treatment but become much more evenly blended before they emerge as one long band. ▽



Jute Mill Foreman E. Hutton, 33 years in the jute trade, 4 years at Tuckingmill)

Miss Pearce feeds the second and third machines which draw the fibres evenly—a process similar to passing them over a revolving comb. She hands them over to Miss D. Cocking, whose responsibility it is to examine the final tresses of jute, which are then ready for roving—the first stage of becoming thread. ▽

In roving, the thick strands of jute seen on top are twisted and thinned while they are rewound on to a series of bobbins for spinning. Miss F. Wallace, who is now working her 31st year with the Company, tends the entire battery of bobbins. When these are full and need to be changed, a loud hammering on a gong—which looks suspiciously like a dust-bin lid—brings seven or eight girls hurrying to her assistance. ▽

On the two spinning frames Miss Hilda Everson (right, 31 years' service) and Miss Norah Nicol (4 years') spin the finished thread.

Winding into convenient rolls before leaving for fuse-spinning completes operations in the jute mill.

Half a mile away, in huts partly hidden by blast mounds, Wm. Hitchens, who has worked at Tuckingmill for 29 years, and J. C. Julian (23 years) spend their eight-hour shifts in mixing fuse powders. Powder cases are broached with wedge and wooden mallet (nothing liable to cause a spark is allowed near, and note the special fireproof clothing), and the powders are mixed thoroughly by passing six times through a four-way hopper before being sifted and poured into square leather bottles to go to the powder loft above the fuse-spinning room.

△ This is the point where two of the three main ingredients come together. Powder feeds through tubes from the loft above and is spun tightly within ten jute threads so as to form the core of the fuse. Next, six more strands of jute thread from the lower bobbins are spun counter to those of the core, and the fuse is taken up by large metal spools. Miss Beattie Andrews (40 years') and two teams of girls, including Miss Osborne, shown here, spin several hundred miles of fuse every working day.

Experience and a hypersensitive touch enable Miss Bessie Rowe—or Miss Lily Negus, who has been doing similar work for 43 years—to locate faults by simply passing her fingers along each stretch of fuse after her attention has been drawn by the stopping of one or more of the automatic examining machines. As each fault is found the inferior piece is cut out and the fuse spliced and marked with coloured thread. ▽

In one part of the factory there is a separate department to deal with miscellaneous orders. Everything done there is similar to the work in the main sections but on a smaller scale. It is particularly notable because of the preponderance of old servants in its personnel. Within a few feet of each other when at work stand four out of a total of seven employees who have completed 22, 35, 41 and 45 years' service respectively.

Miss A. J. Williams (41 years' service) with the assistance of Miss M. Kistle examines the fuse before coating. For eight hours a day she lets two lengths of fuse run through her fingers and can spot a fault at once. ▷

◁ Miss J. Polkinghorn, with 35 years' service, sits among her "pin-ups" and deftly coils lengths of special fuse.

Miss A. J. Wearne joined the Company 45 years ago, and now measures and cuts special fuse before it leaves the factory. ▷

"TALLY-HO"

By Ronald Farquharson (I.C.I. Shipping Manager)

SEVERAL months ago I visited one of the Alkali Division's works, where I was shown something of the production, packing and despatch for export of soda ash.

I watched the gunny bags being machine-marked, then saw them automatically filled and stitched before they passed along a moving platform to be mechanically tallied into a barge. This craft, with three others like it, was shortly to make passage along two rivers and a canal, and then another consignment of a thousand tons would be ready for transhipment into an ocean-going vessel in Liverpool docks.

"I s'pose," remarked the foreman, "that without any of this modern equipment—devices and such-like as we've got here—your old friends the Chinese would take maybe a week to discharge this lot."

"A week !" I laughed. "A mere thousand tons ! . . ."

My mind slipped back through the years and I found myself reflecting on the vivid atmosphere of that festival in North China known as "Cargo-come Day." . . .

Mr. Ho—nearly six foot and over seventeen stone of him—stands framed in the open doorway of the district manager's office in Tientsin. He is head custodian of the Company's extensive godowns on the south bank of the Pei-ho, and, since he professes to speak no English, I am doing my best to explain to him in his own tongue that I shall be on parade at 6.30 the following morning to witness the discharge of a thousand tons of *yung gi-en* (literally "foreign powder") from lighters to store. Mr. Ho understands—that wise and loyal old character understands a lot of things about which he says but little.

At the appointed hour next day I find that the hatch covers have been removed from three lighters moored alongside our property and several gangs, comprising about a hundred coolies in all, are standing by. Mr. Ho, surrounded by stacks of bamboo sticks and with parcels of coppers and small silver spread out on a table before him, sits in his accustomed place by the open godown doors. The stage is all set for the performance of an arduous task made lighter through its accompaniment by all the fun of the fair.

Soon two long processions of scantily clad coolies, each with a two-hundredweight bag perched across his shoulders, are moving along the gangplanks, then over the dusty pathway to converge at the warehouse entrance, through which, as they pass, each receives from the hand of Mr. Ho a plain foot-long bamboo stick. These toilers are the "individualists" who, on completion of five such journeys and the acquisition of the same number of plain bamboos, exchange them for a single one of slightly larger dimensions decorated with a red band. As soon as twenty-five individual journeys have been completed and five of the larger embellished sticks acquired, Mr. Ho recovers them in exchange for the agreed rate of piecework hire, and the recipient, with a bit of "the ready" tucked away in his waistband, can now afford to take a well-earned breather.

At the same time a third procession, of a somewhat different order, is emanating from the remaining lighter and also converging at the godown entrance to claim the attentions of Mr. Ho. It is composed of the more sporting, get-rich-quick element who operate in prearranged pairs and, with the aid of a pole and a sling, carry between them three bags at a time, to the accompaniment of the appropriate sing-song chant. Though he must accept them (like foreigners and death) as being inevitable, Mr. Ho is wont to take a dim view of these duet-performers, since, wise though he may be, he has never succeeded in discovering how to divide three into five, and remains strongly averse to the necessity of adjusting his system to meet special arrangements. He is also somewhat of a rarity in that he is a Chinese born without a natural instinct to gamble, and holds but small regard for chanting team-mates in general, who subsequently draw lots to decide which of them becomes entitled to cash-in the collectively earned sticks and retain the more legal form of tender. In particular he is possessed of still less sympathy towards the unfortunate who, having sweated and strained an hour or so to no more than his friend's advantage, is now obliged to start afresh, humping among the individualists.

. . . as they pass each receives . . . a plain foot-long bamboo stick

. . . engaged in shaking ten chopsticks up and down in a wooden cylinder

With a nice sense of timing—that is, when it may be calculated that Mr. Ho has recovered sufficient length of bamboo to have been fairly active with the disbursements—the scene becomes enlivened by the arrival of a succession of one-man portable establishments. These are broken down to enable them to be borne in two nicely balanced sections dangling from either end of a long pole slung across the shoulder. Presently they are set up on some convenient pitch in the shape of general emporium, chow shop and kitchen combined, and, of course, the complete tonsorial parlour. They comprise the more honest traders; but inevitably, appearing in their wake and bent on getting among the money, come those of lesser repute: the letter-writers, the magicians, the story-tellers, the jugglers, the hand-spring artistes, and several others representative of the native variety of spivs and opportunists. Consequently, as the morning wears on, the scene of activity in front of our godown becomes more and more diverse.

But far from troubling him, the fairground atmosphere surrounding his coolie hire is welcomed by Mr. Ho. He knows that Chinese casual labour becomes as the lilies of the field, in that it toils not when it has a few coppers to spin. The cavalcade about us serves the purpose of attracting a large portion of up-to-date earnings, thereby necessitating an immediate resumption of work by those who otherwise would be too inclined to classify themselves as the idle rich. So it all aids towards discharge being completed with sufficient despatch to avoid payment of demurrage on the lighters: this consideration, coupled with minor concern over the accuracy of his tally, represents the sum total of Mr. Ho's worries.

The chow-vendor has staked out a claim, and already his soup and rice pans are bubbling and steaming away behind him, while his bowls and other utensils are laid out for hire, as required, before him. Meanwhile, in the manner of a rumba musician, he is engaged in shaking ten chopsticks up and down in a wooden cylinder. This not only serves to draw the attention of the multitude to the appetising aromas of his kitchen, but affords the hungry an opportunity of extracting the stick which has a well-defined chip about its unseen end and which allows the lucky ones the privilege of eating "on the house."

Some distance away a sartorially elegant clothier is beating a tattoo, then giving voice concerning his display of coolie cloth and drawing attention to the nimble skill of his cut. A white-bearded patriarch has erected two poles from which hang a score of bird-cages housing a complete aviary of songsters in all sizes and dressed in a wide variety of plumage, all of whom appear to be contributing a fair share to the general cacophony. Farther along, a more lugubrious looking type is sounding a funeral gong and accepting first premiums on insurance against the inevitable expense of one's obsequies. There, in oddly assorted array, stand the peanut seller, the fruit merchant, the black-egg specialist, and the professor with the patent medicines. Business is brisk all round, and the brisker it becomes so much more speedily does the main operation proceed and so much better pleased is Mr. Ho.

The barber, traditionally recognised among the Chinese as belonging to the lowest caste of all, has, appropriately enough, opened up his saloon adjacent to the temporarily erected latrines, and is now engaged upon the task of shaving heads at the rate of half a dozen an hour. Now and again his chair is occupied by a customer who requires a little additional attention, such as a pummelling of the back, a little massage on the stomach, or perhaps just a touch of chiropody. For, despite his low status in the social order, the Chinese barber serves a versatile apprenticeship and furthermore adheres to a fixed tariff, with none of your tossing for double or nothing as practised in the other professions: maybe he finds it too risky when he never knows beforehand what he may be called upon to deal with next!

We move about in an animated, not uncolourful atmosphere amid sounds of clamour and song and an overall spirit, carefree in luck and philosophical in misfortune, that on the whole seems to breathe an air of happiness. In the fullness of time the reformers will change all this—one must trust that they will—but deprived of his simple philosophy, with a host of "rights" in substitution, one earnestly hopes that this lovable character, the carefree coolie, will continue to reap his reward of contentment.

Look at Fu Sung, a fine example of his kind and calling. He is happy indeed, for this has been a day of days for him—so far. From being penniless at dawn, he has since cashed-in the ringed bamboos at the expense of team-mate Wang Er, and had added to this success by selecting the chopstick with the chipped end. He has received double pay for no more than an hour's work, filled his belly free of charge, had his head shaved and a corn cut out of his toe, slept peacefully for an hour and

is still some thirty cents and a few copper cash in hand; furthermore he has just supplemented his earnings by joining a school of squatters near the water's edge and winning two hands of fan-tan. But if, as one strongly suspects will be the case, he allows himself shortly to be drawn towards battling his wits against those of the travelling "catchee-lady" trickster (with the inevitable result), he'll just have to get down to a bit more humping as an individualist.

By mid-afternoon his former team-mate, Wang Er, has atoned for his luckless start and, having eaten, is now sleeping peacefully in a spot of shade. He has also discharged an obligation, in that for the sum of five copper cash he has dictated a letter to the travelling scribe which will serve to notify his aged mother in far-away Hunan that, although he has indeed recently been appointed a partner in the transport and haulage business, he finds himself in no immediate position to subscribe towards her coffin fund. Wang Er's prevailing weakness for face-building is invariably landing him in jams of this sort with his somewhat gullible and ever-opportunist parent.

Time is getting on now, and it will be worth while seeing how Mr. Ho is faring in his battle against it. I put the question to him, and while continuing to juggle his bamboos with his right hand the fingers of his left perform a startling operation on the abacus. Mr. Ho then transfers his glance from some Chinese hieroglyphics scrawled on a scrap of paper before him and casts his eyes towards the sun.

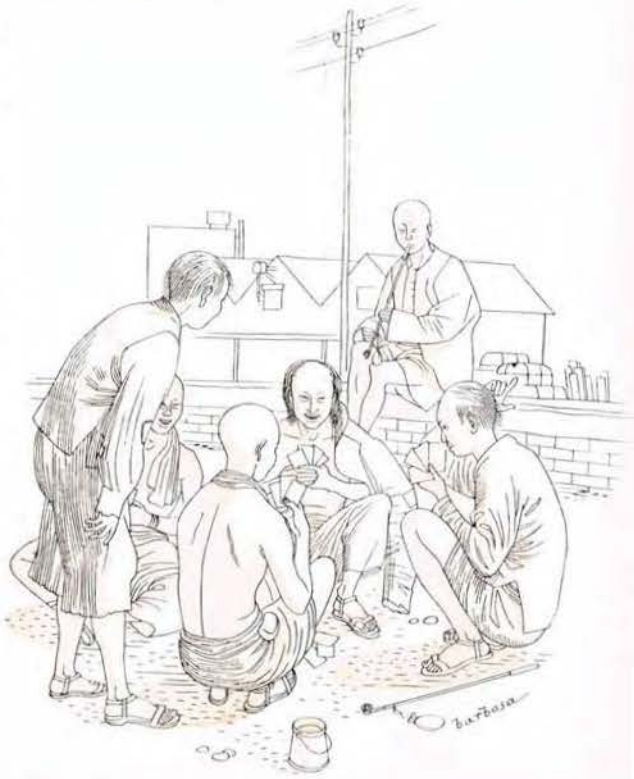
"Another one thousand four hundred and thirty-odd bags to discharge in two hours and ten minutes," he announces with assured exactitude. There is no need for me to ask him whether or when he intends to introduce a "hit or miss" session, or whether it might be more economical to pay a limited amount of demurrage on the lighters. By his own peculiar methods he will have the respective merits of every alternative already weighed up, and at five o'clock, with an hour and a half in hand, he will take the course guaranteed to serve the best interests of all.

"Hit or miss" tactics are much akin to a sporting declaration in cricket, where the opposing side is given a limited time in which to go for the runs or lose the match. At the appropriate moment Mr. Ho loudly proclaims for the benefit of all and sundry that there are yet nine hundred and sixty-eight bags to discharge and seventy-four minutes within which to complete the task: bamboo sticks worth double if accomplished—otherwise quite valueless.

The effect of this pronouncement is electrifying: recumbent bodies spring into life from all over the place, the stalls and sideshows become suddenly deserted, and games of chance are hastily abandoned. This is the best gamble of the day, and the challenge is invariably accepted with joyous acclamation.

The scene rapidly assumes the effect of a cinema film which is being projected on the screen at twice its normal speed. Long lines of laughing, shouting, good-humoured coolies jostle each other as they double under their burdens and then speed back for more. Mr. Ho, with a box of bamboos between his knees, is handing out the sticks so fast that he takes on the appearance of a normally sedate 'cello player who has suddenly gone berserk. Only his assistants, perched on high within and hard pressed to maintain stacking uniformity under such rapid fire from below, are reluctant participators in this win-or-burst effort. The lighter-hands don't care much about it either: they are feeding the remaining bags on to a long queue of impatient backs with such dexterity that from the middle distance they appear as a well-drilled squad performing physical jerks at lightning speed. But Mr. Ho will see that full recompense is paid to all, and before instituting "hit or miss" sessions he is invariably aware that the balance is weighted heavily in favour of double rates, but only over a period calculated to cost less than the price of delay to the lighters. As I remarked earlier, Mr. Ho is not a betting man and only indulges in these practices in the interests of sound economy and also because everyone is happy in the end. Everyone except perhaps the salesmen and spivs, who, like a travelling circus, strike camp at the first cry of "hit or miss" and waddle away towards fresh fields with their emporiums and saloons slung across their shoulders. Mr. Ho is sure they have done well enough—a view that is shared, though rapidly forgotten, by a vast multitude of others.

. . . supplemented his earnings by joining a school of squatters near the water's edge and winning two hands of fan-tan



Then finally, when the shouting and the tumult have died and all except Mr. Ho have departed, I approach him as he remains seated there in the cool of the evening, gently perspiring but quite undefeated as he neatly stacks away his bamboos in readiness for some future festival of "Cargo-come."

"*Hao fa-tze !*", I announce, meaning in the English idiom "Good Show !"; then add with only mild apprehension, "How does it all work out ?"

Mr. Ho seems slightly perplexed.

"Only nine thousand, nine hundred and ninety-eight bags, including five that broke in the lighters," he proclaims sorrowfully. "There must be two more somewhere."

I suppress my utter amazement at this miracle of tallying which Mr. Ho invariably accomplishes with accuracy, aided by no more than two sets of sticks, the beads of his abacus and an amount of money left over in an umber of odd bits of news paper which serve as his till.

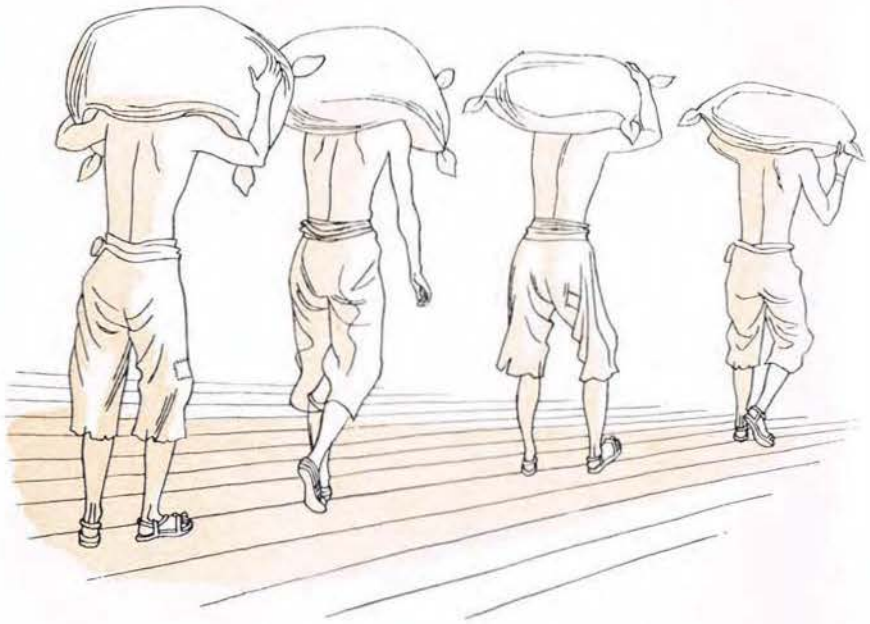
"Two whole bags missing !" I observe in mock horror. "The trouble with you, Mr. Ho," I add in effect, "is that your ideas of making a tally are hopelessly out of date. I hear they have a machine at the works in England —they call it 'the magic eye.' We'll have to see about getting one sent out; we just can't afford to go on losing two bags out of every ten thousand, you know. It's not good enough !"

Mr. Ho, whose sense of humour is far more subtle than mine, undoubtedly catches the look in my eye, but he does not yet know that I have his ace tucked away in my pocket. So I allow him to express himself volubly and at considerable length on the subject of all "devil" machines, which in his view are not only thoroughly unreliable but are created in the West with the sole purpose of maliciously discrediting the far more elegant and accurate methods of the East. "Those two bags," he concludes, "could never have come up the river."

"You are perfectly right, as usual," I assure him quietly. "To a humble Westerner like myself the thing is quite uncanny. This piece of paper here comes from the stevedore in charge of transhipment into lighters at Taku and says 'two bags jump out of sling into bar—get drowned.' "

Mr. Ho does not smile, indeed no one has ever yet observed him to do so. But across the whole of his countenance can be detected the rich and unmistakable glow of Face Preserved . . .

"A week !" I repeated to the foreman. "A mere thousand tons—or ten thousand bags, if you like. Good heavens! Why, they'd have it unloaded in less than a day!"



INFORMATION NOTES

"Information Notes" has been published as a fortnightly bulletin since October 1947. Its purpose is to meet the widespread desire for up-to-date information, not generally available elsewhere, about all phases of I.C.I.'s activities, as well as about those outside events which have a direct bearing upon the fortunes of the Company. At first restricted to a limited distribution among those actually responsible for the dissemination of information internally, it has gradually extended its circulation and is now received by a considerably wider audience, including many works councils; it also serves as the source from which material is derived for a number of Divisional news bulletins. Publication of the Notes in the Magazine*—now to appear monthly—allows readership of the bulletin to be extended still further and will enable all readers of the* Magazine *to have access to the latest information concerning I.C.I. and to appreciate how the march of world events is likely to affect the Company. Although incorporated in the* Magazine*, the Notes will continue to retain their individual identity.*

CENTRAL COUNCIL AT BLACKPOOL

The twenty-eighth Ordinary Meeting of the Central Council was held in the Winter Gardens, Blackpool, on Friday, 18th November, 1949. Mr. John Rogers, Senior Deputy Chairman of I.C.I., was in the chair, and the Main Board was represented by Sir Wallace Akers, Dr. A. Fleck, Mr. W. F. Lutyens, Sir Ewart Smith, Mr. H. O. Smith and Dr. W. J. Worboys.

A NIGHT of blustery rain had given way to fog when delegates to the Central Council began to assemble in the Winter Gardens at Blackpool for the 28th Ordinary Meeting of the Council. But although there was the gloom of autumn outside and little evidence of Blackpool's traditional atmosphere of gaiety, nothing could diminish the genial spirit of this occasion or dim the good humour of what has come to be recognised as an event which mingles business with the pleasure of renewing old acquaintanceships.

Punctually at ten o'clock the hum of chatter was stilled, and the meeting began. After the secretary (Mr. A. W. Inglis) had announced apologies for absence, there was a warm greeting for Mr. John Rogers, chairman of the Council, when he rose to speak.

Mr. Rogers knew that all would share his regret that Lord McGowan had caught a severe chill and was unable to be present. It would be an encouragement to the Central Council to know that, as always, its work was very much in Lord McGowan's thoughts, and he had sent a message wishing it well.

Mr. Rogers then welcomed Dr. F. T. Meehan, chairman of the Australian company, and his colleague on the Board, Mr. Cuming, from whom he hoped that the Council would hear a few words (applause).

Mr. Rogers said that he was sure the Council would wish him to say something about the situation that the country was in today. In our lifetime, he said, we had probably never had a time when the country was in such a parlous condition—"not so much at this actual moment but from the point of view that if we do not play our cards well and exert ourselves, our situation is bound to get very, very much worse." Mr. Rogers emphasised that anything he said was not from a party political point of view. But, he added, touching that party political point there was one thing he wanted to say again: "We are against anyone who wishes to nationalise our Company" (loud applause).

Mr. Rogers then referred to the expansion of the social services, and said that, good as they were, the country could hardly afford all that has been done. Everyone knew we were living on the aid of the United States, but the country could never go on receiving such aid and, in any case, our pride was too great to allow us to be for ever a "pensioner" of the United States (hear, hear!).

At the same time, said Mr. Rogers, there was no need to interfere in any way with the benefits the workers had got. But these benefits must have a solvency about them.

Mr. Rogers then referred to the need for expansion of our output and particularly of our export business. There were difficulties, but the country must overcome them and visualise the time when it could stand on its feet.

The trade unions, Mr. Rogers went on, had properly stressed the rights, privileges, and conditions that the workers should have; but you could not have rights and privileges without having duties. And our duty, as workers, was to help to reduce the cost of production in this country. We had to "pull our socks up." There was one thing that was not a matter of opinion but a matter of fact, and that was that we must all work harder. This did not necessarily imply harder physical effort; as much as anything it meant helping management in devising ways of increasing output.

Mr. Rogers had something to say about the possibility of unemployment. He knew from his early days what unemployment meant to families, and it was certain that no one would willingly do anything that would create unemployment. But it would not be fair not to face the possible temporary unemployment that might take place through increase in output

The chairman, Mr. John Rogers, addresses the Central Council

In session: the scene in the Spanish Hall, showing a section of the Council. In the foreground is the Alkali Division table

No, they're not talking about sweetstuffs! Mr. G. B. Jones and Mr. Dean in an informal moment

due to better methods, machinery and such-like. Nevertheless the country must have co-operation and willingness on the part of all to fall in with the new methods and to work harder. This was not, in his view, a matter of opinion; it was a matter of absolute necessity.

Mr. Rogers went on to deal with the question of incentives. The profit motive was only human, and if the workers were going to work harder and increase output then they must have something for it; there must be an incentive. The incentives could be arranged, but perhaps the greatest incentive of all was to try to get the country back to the position in which it was not dependent on the charity of America (hear, hear!).

Perhaps the warmest approval greeted the chairman's firmly stated belief that never did the country need a national government as much as it did today. We could never solve our present problems through party politics. He hoped that we would have some sort of a national government within a reasonable time to get the country back to a very safe financial position.

The loud applause which marked the end of the chairman's address merged into a businesslike rustling of papers as the secretary announced Item 1 on the agenda, a resolution from the Metals Division "that this Central Council approves standing orders as submitted, but recommends that they be

Mr. R. A. Banks (Alkali Division) urged a week's leave with I.C.I. pay for officers of the Boy Scouts and Church Lads Brigade

Mr. Johnston (Billingham Division) advocated a week's leave with I.C.I. pay for Boy Scouts and members of the Church Lads Brigade

The annual general meeting of the Workers' Friendly Society. Mr. H. O. Smith in the chair, and Mr. J. Cotton dealing with a point

amended and if necessary supplemented before they be again submitted to this Council." This was speedily dealt with, the motion as proposed by Mr. Gilmour (Metals Division) and seconded by Mr. Hartshorn (Metals Division) being carried *nem. con.*

After confirmation of the minutes of the meeting held on 6th May, 1949, the Council turned to consideration of a resolution, submitted by Billingham Division, "that one week's leave with I.C.I. pay should be granted to members of the Boy Scouts and Church Lads Brigade in order to attend annual camp."

Mr. Blackwood (Billingham Division) made a strong appeal to the management to consider this resolution. It was not a request for something new but for the restoration of the privilege they enjoyed pre-war. He was warmly supported by Mr. J. Johnston, also of Billingham, who in a lively speech which gained applause gave an explanation of the valuable work done by these organisations. He pointed out that the privilege had been granted throughout I.C.I. until withdrawn in favour of leave being given only to pre-service units. It would be wrong for a privilege to be withdrawn. As an ex-Boy Scout, who had gone from Tenderfoot to Assistant Scout Master, Mr. Johnston was in a good position to put his case, and the Council applauded a sound debating speech. Mr. R. A. Banks (Alkali Division), who followed, was full of admiration for the previous speaker, but he felt bound to point out that the Boy Scout movement was substantially different from the pre-service movements. The Boy Scouts and members of the Church Lads Brigade were free to come and go. They joined these movements for the fun of the thing, and they regarded annual camp as a holiday. On the other hand, the officers had to work very hard, and he would like to propose an amendment that a week's leave with pay be given to the officers of these two movements but not to the boys. Moderate applause for this proposal was followed by a sturdy defence of the original resolution by Mr. Angus (Billingham Division), who said that his Council was unanimous on the restoration of the concession. Mr. Smith (Metals Division) agreed absolutely with the view put by Mr. Banks, and was sure that as far as the Church Lads Brigade was concerned they preferred camp without pay. Mr. Owen (Billingham Division) then entered the lists with arguments for and against the proposal, after which the Council secretary, in answer to a question, confirmed that when the concession was originally granted there was only one week's paid holiday. Mr. Smith (Metals Division) returned to the microphone to support Mr. Banks' amendment.

Before the vote was actually taken, Mr. H. O. Smith (Personnel Director) rose to explain that, while he had no wish to influence the voting, he felt bound to make it clear that the matter had come before the I.C.I. Board previously and that while they appreciated the value of these organisations, they had to draw a line somewhere to the concessions which the Company could give. He could assure the Council, however, that any further resolution would be most carefully considered by the Board. He added that the Board was not without informed guidance on the matter, because one of its lay directors holds high office in the Boy Scout movement.

On a show of hands the amendment was lost, but the motion as put to the Council in the terms proposed by Billingham Division was carried—to the evident delight of those at the Billingham table. Whereupon the Council—now warming up after this brisk debate—proceeded to listen attentively to Mr. Paterson (secretary, Workers' Pension Fund), who gave the Board's considered opinion as to why it could not accept three resolutions relating to the Imperial Chemicals Workers' Pension Fund, and which had been agreed at the previous Council meeting. There was little disposition among representatives to challenge the Board's view, though Mr. Hubball (Alkali Division) came to the microphone as a dissentient.

This marked, so to speak, the occasion for a mid-morning break, and the secretary's announcement of coffee in the anterooms was the signal for a mass adjournment in search of welcome refreshment.

After the interval, Mr. Rogers had a hushed audience to hear his tribute to Mr. V. St. J. Killery, a director of I.C.I., who

An informal Imitas treat: Mr. Rogers considers a question with Billingham Division representatives

Dr. Meehan (left), chairman of I.C.I.A.N.Z., listens to Mr. Cuming, a colleague from "down under"

Mr. John Hay, Chief Labour Officer, deals with the future of the Staff Grade Scheme

Mr. Gilmour (Metals Division) on one of his sessions at the "mike"

Relieving Mr. McCall as chairman of the workers' representatives: Mr. W. Brown (Dyestuffs Division)

"We are trying to devise new drugs for the treatment of disease. . . ." Dr. L. B. Wevill explains the work of Imperial Chemical (Pharmaceuticals) Ltd.

Unable to take his full part in the business of the Council because of indisposition: Mr. T. McCall (Nobel Division), chairman of the workers' representatives

The only woman to address the Council: Mrs. Cross (Metals Division) faces an almost entirely male gathering

died in August. His death was a great loss to all his colleagues in the Company, among whom he was valued as a director and as a friend. Although suffering from an illness, he had recently been to the East on the Company's affairs and had died soon after his return. It could be said with truth that Mr. Killery had really died at the helm.

Mr. McCall (Nobel Division) chairman of the workers' representatives, then explained that as a result of indisposition he did not feel fully able to carry out his duties that day, and he asked Mr. Brown (deputy chairman) to act in his place.

Mr. John Hay (Chief Labour Officer) was the next speaker, and his announcement of the future of the Staff Grade Scheme was heard with close attention. He reminded the Council that two years ago it was informed of the Company's intention to review the Scheme because there had been criticism from workers' representatives of the method of selection for promotion, and because the management was concerned about the higher rate of sickness absence amongst Staff Grade workers. At the same time, various suggestions for improving the Scheme had been suggested. Mr. Hay did not disguise the fact that the Board was still worried by the high rate of sickness among Staff Grade workers. A certain number of individuals had taken an unfair advantage of the Scheme; and statistics revealed a sharply increased rate of sickness immediately after promotion to Staff Grade. However, it had been decided not to call a halt to further promotion, and promotions to raise the number of Staff Grade up to the level already authorised would be made at the usual half-yearly reviews.

Selection for appointment would continue to be made on merit, and the Board was satisfied that the criticism of favouritism in selection was entirely unjustified. Selection was the function of management and must remain so.

It had been decided that the system of sick visiting, which had operated successfully in some Divisions, would be extended and certain other steps would be taken to guard against abuse of the Scheme. The Board continued to believe that the principles underlying the Staff Grade Scheme were good, and was confident that the more positive steps now to be adopted to protect the Scheme from abuse would have the whole-hearted support of all those workers who play the game.

Mr. Hay then had a welcome announcement to make about the Benefit B Scheme, in future to be known as the I.C.I. Sickness Benefit Scheme. The Board had sanctioned its continuance in an improved form, and there would be substantial increases in rates of benefit. It was proposed to introduce the Scheme on 1st January, 1950, and thus a wartime measure would now become a permanency. That these proposals for extending financial aid in cases of sickness were acceptable to the Council was evident from the loud applause with which Mr. Hay's announcement was received. Indeed, the deputy chairman of the workers' representatives, Mr. Brown (Dyestuffs Division), described the concessions as gratifying, and he was sure that there would be a good vote of thanks from the workers.

Commenting on Mr. Hay's statement, which, he felt, required further study before considered views could be expressed, Mr. Gilmour (Metals Division) remarked that although the Scheme was probably the best in the country, he felt that in the selection of workers for promotion to Staff Grade sufficient weight had not been given to length of service.

On the question of the representation of women at Central Council meetings, Mrs. Cross (Metals Division) said that the resolution which had been referred back at the previous Central Council had not met with support, though interest had been shown. This was a pity. One of these days they might find on an agenda a motion affecting women employees. And, said Mrs. Cross—who was evidently quite prepared to rouse the hornets' nest as represented by an almost entirely all-male gathering—no man can put forward the women's view. Whether or not the delegates agreed, they at least appreciated the speaker's courage, and rewarded her with delighted laughter, which became very loud applause when Mrs. Cross moved that the discussion on the representation of women be suspended.

Although the motion was seconded by Mr. Gilmour (Metals Division), delegates were not so ready to let the matter rest. Mr. Hayes, for the Alkali Division, was surprised at the last speaker giving way so easily, and he was echoed more forcefully by Mr. Tierney (Plastics Division), who was of the opinion that it would be better if there were more women at the conference. Perhaps the male delegates were afraid that their

Sir Ewart Smith, I.C.I. Technical Director, presenting the report on the safety campaign

A forceful argument in favour of the representation of women: Mr. Tierney (Plastics Division)

social activities might be disturbed! For Billingham, Mr. Hutton said that the wiles of women can lead men astray. This was a tactical move to win over the sympathy of councillors. Full facilities were already provided for the representation of women, and he was of the opinion that women were satisfied with their present representation. Once you gave them a start (loud masculine laughter) you would, said Mr. Hutton, need that conference room next door that holds 5000.

It seemed almost a pity that this lively debate had to end so soon. But other delegates were evidently prepared to leave the matter without further discussion, and so the motion to suspend discussions was put and carried *nem. con.*

On the resolution to consider the discontinuance of the pre-meeting of workers' representatives at Division and Central Council level, Mr. Clapham (Metals Division) said that this matter had again come up at his Division Council and had been fully discussed. It was apparent that there was a lack of unanimity in the Council and, feeling that unanimity was essential, his Council had decided not to take a vote on it. His Council therefore had no formal support for their resolution, but on behalf of the management representatives he would like to say that they would be happy to try the experiment if it was desired in the future by workers' representatives. Mr. Gilmour (Metals Division) said that the matter had been fully discussed at the last Central Council meeting and there was little need for further discussion. It was essential that there should be unanimity before going further. Pre-meetings were of value to new workers' representatives. He suggested that the matter should be left precisely where it was, to be further considered with an open mind.

Mr. Rogers gave it as his view that it would now be advisable to leave it alone, as a matter that had been fully discussed. Referring to Mr. Gilmour's remarks about new workers' representatives, he hoped that no new or shy member would fail to speak, and he was grateful for the discussion that had taken place.

The meeting then turned to consideration of the Suggestion Scheme. In a brief comment, the Council Secretary pointed out that the figures for the period ending August 1949 showed the highest number of suggestions ever received in any period of six months. Mr. Lyons (Billingham Division) felt that the presentation of the tables of figures could be clarified, and the secretary agreed that this would be done.

Mr. Cuerdon (Dyestuffs Division) felt that 10s. was not much for an encouragement award and that 15s. should be the minimum in all Divisions. He was supported by Mr. Lappin (Dyestuffs Division), but after the Council had heard from Mr. Polack (General Chemicals Division) the view that if the minimum award was raised to 15s. the management might be more "choosy" in making awards it was evident that delegates were content not to look a gift horse in the mouth, and the motion to raise the minimum award was defeated by a majority vote.

Sir Ewart Smith (I.C.I. Technical Director) then rose to present the report on the safety campaign. He congratulated all concerned that the accident frequency rate was going down. It was encouraging to see that the frequency rate was down to 1·5; he hoped that next year it would be down to 1. On the debit side, however, there were two aspects of the campaign

As a Cornishman, Mr. H. O. Smith obviously enjoyed meeting Miss Ellis and Mr. Rowe, two representatives from Buckingmill

which were not so good. The first concerned fatalities. It was essential to reduce the frequency rate of accidents in order to bring down the risk of fatal accidents. Then there was the problem of the duration rate—the average time of absence for each lost-time accident. Although the number of lost-time accidents had gone down, the duration of time off in respect of accidents had gone up. There must, said the speaker, be more keenness on the part of individuals to get back to work after an accident. There must be a drive for a continuing rate of improvement. This was no question of "sides"—in this matter of safety all were managers, for it was the way in which each managed his own job that was important. Good housekeeping and accident prevention went together; a clean and tidy works was a works with a low frequency accident rate. Sir Ewart concluded: "We have a lot of challengers. We must look to good management at all levels to reduce the frequency rate."

If the applause which marked the close of Sir Ewart Smith's address was a measure of the determination of the Council to attack the problem of the accident frequency rate with renewed vigour, there could be little doubt about the outcome.

It was now 12.45 p.m., and delegates could adjourn for lunch with the satisfaction of having completed a useful morning's business with good humour and an absence of "fireworks."

Nor was there any sign of post-prandial lethargy when the Council resumed. Dr. L. B. Wevill, of Imperial Chemical (Pharmaceuticals) Limited, had no difficulty in holding his audience with a brilliant address on "The Role of I.C.I. in the Treatment of Disease." Here was the skilled lecturer—lucid, concise, and with every fact marshalled. It was noted by many that Dr. Wevill spoke for nearly three-quarters of an hour without a note; nor was he ever at a loss for the right word or the telling phrase, and it is certain that no story of the development and purpose of the Company's youngest venture could have been better told.

When the applause for Dr. Wevill had quietened, the chairman rose to introduce Dr. Meehan, chairman of I.C.I.A.N.Z.—a most welcome visitor to the Council. Dr. Meehan said that all

Representatives of Alkali (left) and Metals Divisions consider some of the arguments

Oh, what a beautiful evening! Billingham and General Chemicals Divisions get together for dinner after the Council meeting

A foursome from Salt Division believe that "beer is best"

on the staff of I.C.I.A.N.Z. sent their greetings "and wish you everything you wish yourselves." He was grateful for the extreme cordiality with which he had been received in every Division and at Head Office. He had been all round the Company, and he had been particularly impressed by the development in mechanisation at the Tunstead Quarry of Lime Division. If that took first prize, said Dr. Meehan, then the Nobel Division's new blasting explosive must have second prize. It was a top-notcher.

Mr. Cuming, who had been introduced by Mr. Rogers as managing director of an important fertilizer group in Australia and a director of I.C.I.A.N.Z., pointed out that in New Zealand they were faced with problems of great similarity to those in Britain. His company was proud of its association with I.C.I., and, said Mr. Cuming, "we want the best of you out there!" It was his pleasure to be the bearer of a message from his old works where they had asked him to express their great appreciation and thanks "for the way you stuck it out during the war."

Both Dr. Meehan and Mr. Cuming could have been left in little doubt about the pleasure which their visit had given to the Council; the applause had a warmth and sincerity which was evidence of the feelings of the meeting.

Resumption of Council business enabled Mr. Paterson (secretary, Workers' Pension Fund) to present the report. He said that 541 new pensions had been granted last year, bringing the total number of worker pensioners up to 4886, and that the average pension granted last year was 22s. 6d. per week. Total investment of the Fund was £m8½. Membership was now just 50,000; these figures were highly gratifying, and he was glad of the opportunity to mark his appreciation of the efforts of all Division managements, as shown by the increased membership.

After Mr. H. Banks (Alkali Division) had announced the withdrawal of a resolution which appeared on the agenda in the Division's name, Mr. F. Allcock (Metals Division) came to the microphone to explain a further resolution submitted by his Division. This asked that the Company consider in individual cases an extension of the period for repayment of loans in certain circumstances when there was hardship and financial distress. Mr. Hartshorn (Metals) in seconding, explained that there was no intention of carving up the Pensions Fund. The resolution hung on three words—"in individual cases." It was simply a suggestion of a method of easing repayment in particular circumstances.

Replying, Mr Cotton (Treasurer's Department) was sympathetic, but was sure that if there was bona fide distress some temporary alleviation of the situation could be arranged within the provisions of the Scheme. In his opinion there was no case at the moment which merited alteration in the Scheme, a view which evidently commended itself to the meeting, and the resolution was not proceeded with.

It was then the turn of Mr. Henry Maxwell, Editor of the *I.C.I. Magazine*, to make the official announcement that, beginning with the January issue, the *Magazine* would be published monthly instead of every two months. His brief explanation of the circumstances behind the change gave him the opportunity to let several cats ("Street" and otherwise) out of the editorial bag, and the Council also relished his account of the adroit handling of certain awkward correspondence. Indeed, despite his own admission that the job of editing the *Magazine* was a "cushy" one his listeners must have been left convinced that the "cushion" was sometimes anything but soft. Mr. Maxwell added that in future the columns of the *Magazine* would be open to correspondence on all topics.

A resolution from the Paints Division Council "that one-half of the employee representatives, or should there be an odd number, a bare majority, shall retire annually but shall be eligible for re-election" was next considered and produced a brisk exchange of views.

Mr. Goldswain (Paints Division), supporting the resolution, suggested a two-year period for employee representatives. Retirement in the first instance would be by ballot, thereafter by rotation. He had the ready backing of Mr. Allardyce (Billingham Division), who pointed out that at present there was a risk of developments leading to some sections finding themselves with inexperienced representatives. But nothing that Mr. Allardyce said evidently convinced Mr. Thomas of Metals Division, who pointed out that councillors were selected by the workers, and it was not up to them to say how long they should remain in office. Mr. Costley (Paints Division), in support of the resolution, stressed that it took six months for a representative to learn the ropes. Mr. Jones (Dyestuffs Division) was still not convinced that there was any further need to alter the rules, but the big guns of Billingham, as represented by Mr. Hutton, felt that the resolution should be supported because it showed, in his opinion, good common sense. Must they bow to the whim or fancy of constituents? asked the speaker. Being a councillor was not all beer and skittles.

Mr. Gilmour (Metals Division) felt bound to oppose the resolution, though he appreciated the importance of continuity at Division and Central Council levels.

The Council secretary then suggested a slight amendment of the wording of the resolution, and the motion was put to the meeting. The "division" showed 71 in favour and 100 against. So the "noes" carried the day, the motion being referred back.

After this lively discussion the Council turned its attention to revised standing orders, which it was agreed should be remitted to a sub-committee for detailed study.

As nobody evinced much interest in "Any Other Business" Mr. McCall came to the microphone to record a vote of thanks to the chairman and to ask that the Council should mark its appreciation of the very able way in which Mr. Brown had carried out his duties as deputy chairman of the workers' representatives—appreciation which was very readily shown. The meeting closed with a tribute from Mr. Rogers to the co-operation and help of all concerned.

Some of those who crossed the Border to Blackpool. A group of Nobel Division representatives, including Mr. McCall, Mr. Wilson and Mr. Knox

STAMBOUL TRAIN

By P. C. Allen
(Plastics Division)

WE LEFT Paris in the Simplon-Orient Express at a quarter past eleven on Saturday evening and arrived at Istanbul dead on time at 6.45 the following Thursday morning. Altogether our two through carriages from Paris covered 1880 miles in 101½ hours, passed through eight countries, changed direction six times, and employed the services of no fewer than twenty locomotives.

Merely to pass through the Iron Curtain and emerge on the other side seemed justification enough for the journey, particularly as at several towns the stops were long enough to permit brief sight-seeing, but it also provided a wonderful series of romantic names: the Simplon Tunnel—longest in the world—Verona, Venice, Trieste, Ljubljana, Zagreb, Belgrade, Nish, the Dragoman Pass, Sofia, Plovdiv, Greek Thrace, Adrianople, Lüle Burgas, Chatalja, and finally the domes and minarets of Constantinople itself.

In reality the journey is simple enough. Three days a week there is a through sleeping car and a through day coach from Paris to Istanbul by this route, and the train is reasonably well patronised, though on the day I travelled I was the only passenger—indeed the only person on board—who went all the way. Provided that one has a visa for Turkey there are no particular difficulties in getting the transit visas to travel through Yugoslavia and Bulgaria, and with these one can go about quite freely in Zagreb, Belgrade or Sofia. What would happen if one missed the train or used a camera at the wrong moment is not, however, certain, but I found the minimum of red tape and interference throughout the journey.

Food is a bit of a problem, as there is no dining-car on the train between Monday night, when you reach Belgrade, and Wednesday afternoon, when a Turkish diner converted from an old baggage coach is added to the train at Adrianople, or Edirne, as we should learn to call it. However, a number of meals "ashore," purchases from the dining-car before we left Italy, and an iron ration from home of half a dozen hard-boiled eggs and a bottle of brandy provided quite enough to live on.

The Simplon-Orient Express in the Sava Valley between Ljubljana and Zagreb

For those interested in such things the train is quite a study in itself, as it changes its character several times during the trip. From Paris through to Milan, and even through to Trieste, the Simplon-Orient Express is a pretty respectable fast train by any standards. On waking up on Monday morning, however, as we got near Ljubljana, the first Yugoslav town of any size, I found we were clattering along through farming country in pretty disreputable company, some very elderly coaches attached to the back of us and some cattle trucks next the engine.

From Ljubljana to Belgrade we were a fairly good express train again and did not stop very much, and the same was true from Belgrade down through Serbia. South from Belgrade we had sleepers for Skoplje, as well as Nish and Sofia, attached to the train and a very fine Yugoslav engine built in Germany, the origin of most engines in south-east Europe.

We had had a 3½-hour stop in Belgrade which I spent trying to find the Danube and taking wine in a café. I found myself at a table with, it seemed, two workers just out of the plant, and, explaining myself as English, we clinked glasses and, I would judge, drank each other's healths and those of our two fatherlands.

Up through the Dragoman Pass between Yugoslavia and Bulgaria, which showed us some fine mountain scenery, we were a very light train and so continued all the way to Sofia. Here we had a twelve-hour wait and therefore ample time to find food and drink in the Hotel Bulgaria, which was very comfortable, and to see the town.

We left Sofia at midnight on the Tuesday, and next morning, after the train was remade at Plovdiv, we ran through to the Bulgarian border as a local, stopping at all stations, headed by a tank engine. In the stretch of country between the Bulgarian border and Turkey we ran for about forty miles through Greek Thrace with a short sortie into Turkey to the station of Edirne and out

National dress at Zagreb. The peasant women of Croatia still stick to their traditional dress, which may always be seen in the streets of Zagreb on market days

again. In this stretch we rather came down in the world, for the train was then made up of a Turkish engine pushing five empty trucks to explode mines, followed by four Turkish postal wagons conveying goods in bond from Czechoslovakia, then the baggage car diner, then our two carriages, then some very primitive local rolling stock carrying armed guards, and finally a truck at the rear mounting an armoured car with a two-pounder gun.

In this style we ambled down the Maritsa Valley at about 20 m.p.h., apparently ready for anything. It was only this year that this section of the line was reopened for through traffic, and there is still much evidence of Communist activity in burnt stations and fortified police posts, although the troops and people looked cheerful enough and there were many children about. This stretch of the journey was lightened by the Greek passport officer, who spoke good English and entertained me to Retsina, a delightful resinated wine tasting like *vin ordinaire* mixed with eucalyptus and turpentine.

A brief stay in Istanbul under the kind guidance of I.C.I. (Turkey) was one of the most enjoyable visits I have ever made. Certainly after five nights in the train the bath I had before breakfast on the morning I arrived is the best I have ever had in my life. The city is extraordinarily beautiful, with some magnificent buildings and a superb situation overlooking the sea. With its shops full of goods, its people lively, mostly well dressed and full of energy, with cars and carts in the streets and thick traffic, Istanbul is a sharp contrast to the rather colourless and utilitarian aspects of Belgrade and Sofia. It was nice, too, just to set foot in Asia and to look at the first hills of Anatolia, which stretch nearly a thousand miles to Erzerum, Ardahan and Kars and the mountains of the Caucasus.

The voyage from Istanbul was a little holiday in itself. For twenty hours I travelled by the Turkish Lines S.S. *Istanbul* across the Sea of Marmora and out through the Dardanelles into the Aegean. The ship was comfortable and the atmosphere on board extraordinarily informal and enjoyable. The Captain, who spoke fluent and inaccurate English, was everywhere at once and was genuinely glad to see passengers on the bridge, where he gave directions to the quartermaster, pointed out sights to the passengers, sent for coffee, handed out field-glasses and allowed the passengers to play with the radar. He also speeded up the ship so that we could pass through the Dardanelles in daylight, and gave orders for me to be called in time to see the Temple of Poseidon on the cliffs of Sunium as we entered the Gulf of Aegina the next morning.

The Simplon-Orient Express at Zagreb. The engine is a huge and hideous 4-8-0 made in Hungary

The sight of the Dardanelles fulfilled a long-felt ambition, and even the huge stone letters on the hillside at Chanak spelling out "18th March, 1915," commemorating the date and place where the British fleet turned tail, could not create much more than feelings of admiration for a stubborn Turkish defence, although I suppose that that one moment did more to alter the course of the first world war than almost anything which happened afterwards. Now, on the tip of the Gallipoli Peninsula, you can see war memorials to the French and the British. I asked the Captain if there was a Turkish memorial also, and he made, I thought, a good reply. He said: "No, there is no Turkish memorial; I guess the whole place is our memorial."

A few moments later we were passing through the headlands at the mouth of the Dardanelles, with Samothrace rising 5000 feet sheer out of the sea, and Imbros also to starboard, while looking to port one could say, in recollection of one's schooldays, "*Est in conspectu Tenedos.*" Half an hour later an enormous full moon, the colour of an orange, rose out of the fields of Troy, and the very limits of romance were attained.

Next morning we were still steaming in a flat calm between the islands of Euboea and Andros, and a few minutes later the white columns of the Temple of Poseidon at Sunium were in view on the high cliff above the Aegean, with the tawny mountains of Greece inland behind and the islands in the sea at the other side.

The Piraeus, where we landed, made a distressing contrast—a hideous and disgusting town and as hot as a furnace. The rest of the trip is really another chapter, but in brief consisted of a week-end in Greece with many beautiful and interesting things seen and done, including sleeping out under the umbrella pines at Epidaurus and a visit to Mycenae, carried out at a temperature of about 95° F. in the shade. Greece was left by air on the Monday morning and London reached soon after nightfall, completing a round trip of something over 4500 miles in ten days.

"The last enemy." Bulgarian tommy-gunner standing at the frontier of Bulgaria and Greek Thrace watches the Express leave Bulgarian territory

The Simplon-Orient Express at Nea Orestias, showing the trucks in front to explode mines. The four coaches close to the engine are Turkish postal wagons conveying goods in bond from Czechoslovakia to Turkey

Greek children in a village near the Bulgarian border

(Photos by the author)

The gold and blue mosaic of the Christ Pantocrator in the dome of the eleventh-century church at Daphni

△ *The early seventeenth-century Mosque of Ahmed, Istanbul, also known as the Blue Mosque from the colour of the tiles inside. Other than at Mecca, this is the only mosque with six minarets*

△ *Athens. Mount Lycobettus*

▽ *Athens. The Acropolis from the north-west*

Nauplia and the great Venetian fortress of the Palamidi. Nauplia was the first capital of Greece after the insurrection against the Turks, from 1827 to 1834

MODEL ENGINEERING

It may be because so many engineers are born Scotsmen that Nobel Division's Recreation Club at Stevenston (Ardeer) boasts a particularly virile Model Engineering Section : a section whose progress was reported with obvious satisfaction at the last Annual General Meeting of the Club, and one in which craftsmen work side by side with younger members and show them all they know. Closely associated with it, but too far away to join forces, are the experts and enthusiasts at Westquarter and the Sabulite factory near Durham.

In their hands wood and metal soon become locomotives and stationary engines, rail-road stock such as breakdown cranes, cars fitted with Jetex engines and capable—though with a wheel-base of less than one foot—of a speed of up to fifty miles an hour, and a great variety of aircraft. Every part of each model is made on the spot ; for any part to be bought ready-made, and merely assembled, would be almost sacrilege.

Time is of no account when a model is begun. Enthusiasts soon become oblivious to all but the job in hand. On each of three club nights in the week, at least fifteen members are busy at the benches. Once a month members assemble to view films of interest to model engineers.

The provision of a workshop big enough for all presented no real obstacle. A plot of ground behind the Clubhouse was cleared and, with materials salvaged from the factory and given by the Company, voluntary labour and the ready help of fellow tradesmen at Ardeer, they built for themselves a large-windowed and well-lighted workshop measuring roughly 100 ft. by 20 ft. and complete with benches.

Judging by the number of members who assembled there before the Recreation Club's annual meeting, here is a club section whose shadow is unlikely to grow less.

1. Mr. H. Wardop with one of his Jet cars. 2. Mr. J. Templeton adjusts his 7 mm. scale 4-4-2 loco. and breakdown crane. 3. Mr. M. Wilson assembles the fuselage of a large model aircraft. 4. Mr. W. McLelland does some miniature boilermaking. 5. Mr. A. Bell's forte is diesel engined 'planes. 6. Mr. P. Boylan with a fascinating model beam engine made by Mr. Gilmour, Assistant Works Engineer at Ardeer. 7. Mr. P. T. Atkinson (Sabulite) and "3448", his cup winning, coal-fired model, built in spare time between 1934-48, which can haul 5 adults or travel at 10 m.p.h. carrying 2 adult passengers. 8. Mr. Clibborn (Works Engineer, Westquarter) is a model railway enthusiast, whose railroad and effects need more than a little floor space. 9. Mr. P. Mulholland with his half-inch scale loco. "DYAK". 10. Mr. J. Robertson finishes a part for his half-inch scale locomotive, "HELEN LONG".